

DEPARTMENT OF THE AIR FORCE WSMC REGULATION 57-3
 Headquarters Western Space and Missile Center (AFSC) 2 APRIL 1982
 Vandenberg Air Force Base, California 93437

Operational Requirements

RANGE RESOURCE SCHEDULING AND CONTROL

This regulation establishes the policies, procedures and responsibilities for scheduling Western Space and Missile Center (WSMC) resources and applies to all personnel and agencies using range resources.

Chapter 1-Operation Policies	Paragraph	Page
Introduction.....	1-1	3
Hours of Operation.....	1-2	3
Overtime Operations.....	1-3	3
Extension of Overtime Operations.....	1-4	3
Schedule Control.....	1-5	3
Allocation of Range Resources.....	1-6	3
Hazardous Test Operations.....	1-7	3
Operational Support Systems Certification.....	1-8	4
WTR Users' Handbook.....	1-9	4
Chapter 2-Forecast Planning and Control		
Responsibility.....	2-1	5
Joint Pacific Area Scheduling Office.....	2-2	5
Eighteen Month Forecast.....	2-3	5
Weekly Forecast.....	2-4	5
ARIA Scheduling.....	2-5	5
Chapter 3-Current Schedule and Control		
Responsibilities.....	3-1	6
Procedures.....	3-2	6
Chapter 4-Geodetic Earth Orbiting Satellite-3 Operations		
Responsibility.....	4-1	7
Scheduling Procedures.....	4-2	7
Reports.....	4-3	7
GEOS Technical Questions.....	4-4	7

Supersedes WSMCR 57-3, 6 June 1977 (For summary of changes, see signature page.)

No. of Printed Pages: 18

OPR: WSMC/ROR (R.E. BLASCHKE)

Approved by: Col Alfred H. Davidson III

Editor Mrs V. Simmonds

Distribution F; X, see distribution page.

Chapter 5-User Responsibilities and Procedures

Prerequisites for Scheduling.....5-1	8
Scheduling Actions by Range Users.....5-2	8
Other Responsibilities of Range Users.....5-3	9

Chapter 6-Test Data Production and Control

Responsibilities.....6-1	10
Test Data.....6-2	10
Data Status.....6-3	10
Data Discrepancies.....6-4	10
Range Data Questionnaire.....6-5	10
Data Requests.....6-6	10
Data Handling.....6-7	12
Data Quality Control.....6-8	13
Data Storage.....6-9	13
Test Data Planning.....6-10	13
Postlaunch User-Supplied Parameters..... 6-11	13

Chapter 7-Schedules and Statistical Reports

Forecasts and Schedules.....7-1	14
History of Operations.....7-2	14
Resource Utilization Summary.....7-3	14
Forecasted Resource Utilization.....7-4	14

Chapter 8- Operations Security

Schedule Classification.....8-1	15
Operations Security (OPSEC) Practices.....8-2	15

Chapter 9 - Resource Scheduling and Control Forms.

Forms Identification and Availability.....9-1	16
---	----

Chapter 1

OPERATIONS POLICIES

1-1. Introduction. It is the objective of the Western Space and Missile Center (WSMC) to insure that all test operations, and associated data requirements, are fully supported at a date and time selected by the range user or as close to the range users' requested date and time as is possible. Therefore, WSMC/ROR will honor each authorized user's schedule requests, consistent with mission priorities, range capabilities, economy of operations, and established safety criteria.

1-2. Hours of Operation. Western Test Range (WTR) resources are normally operational 0800-2400 Local (L), Monday through Friday, excluding holidays. The Operations Resource Control Center (ORCC) is operational 24 hours a day, seven days a week. Certain range resources are available on other than the normal schedule to accommodate data requirements or in the interest of efficiency. Tests will be restricted to normal range working hours except when overtime is specifically authorized. The "range week" begins at 0001 Monday and extends through 2400 Sunday.

1-3. Overtime Operations. Operations may be scheduled outside the normal operating hours when urgency of the test or test objectives so dictate. All overtime support, including setup time, is fully reimbursable by the range user.

1-4. Extension of Overtime Operations. Operations scheduled outside the normal range hours may be extended if resources are available. Extensions will not normally be for more than four hours. However, reschedule of such tests will be accepted, if resources are available, with a start time as labor and resources can be secured.

1-5. Schedule Control. Problems or conflicts pertaining to the established schedule will be resolved by WSMC/ROR, after negotiations with the affected users and support agencies.

1-6. Allocation of Range Resources. Range resources are scheduled in accordance with applicable Operations Directives (OD), internal test directives, teletype instructions, and verbal agreements deemed necessary to insure efficient use of these resources.

1-7. Hazardous Test Operations. Hazardous test operations will be accepted for scheduling only if they are in compliance with WSMCR 127-1, and only after the hazardous procedures to be used have been approved by the WSMC Director of Safety.

1-8. Operational Support System Certification. Instrumentation, Communications, and Data Systems (both hardware and software) normally will be committed for use by WSMC/RS only after formal operational certification procedures have been completed. See paragraph 6-10 for exceptions. After the support system certificate has been signed, scheduling of operational resources will be in accordance with paragraph 1-6.

1-9. WTR Users' Handbook. This regulation, by necessity, is a condensed version of the procedures described in the Western Test Range Users' Handbook. Range users should be referred to the Range Users' Handbook when a more detailed explanation is required.

Chapter 2

FORECAST PLANNING AND CONTROL

2-1. Responsibility. WSMC/RORA will integrate and publish the weekly schedule, including range users' scheduling requirements and range preparation tests, maintenance, modifications, software development, etc. RORA has approval responsibility for proposed systems downtime and all major tests for Vandenberg AFB for the next 18 months.

2-2. Joint Pacific Area Scheduling Office (JPASO). RORA will provide the administrative support (facilities and personnel) for operation of the JPASO in accordance with the DOD Deputy Director for Research and Development and Engineering Charter approved 26 Mar 1968.

2-3. Eighteen Month Forecast. JPASO will publish and distribute an 18 month forecast of operations, including sensor status, so that all interested agencies are kept advised of the long range resource utilization schedule. The forecast will include:

a. A three month expanded schedule of operations to include use of major range resources and mobile sensors.

b. An 18 month summary of all major operations to include date and time (if available), operation number, job order number (JON), booster, and program name for unclassified operations.

c. Projection of sensor status for Pacific Area Support Facilities, which include the Navy's Pacific Missile Test Center (PMTTC) and the Army's Kwajalein Missile Range (KMR).

d. A consolidated Advanced Range Instrumentation Aircraft (ARIA) schedule. This schedule will include missions, maintenance, modifications, ground tests, etc.

2-4. Weekly Forecast. A weekly scheduling conference will be held at 0900 each Thursday morning in the theater, building 7000. All attendees will receive a detailed schedule of all range operations for a seven day period starting the following Sunday at 0001L time.

2-5. ARIA Scheduling. WTR/ROR will act as the lead range for all ARIA missions in support of WSMC test operations. In addition WSMC/ROR will provide scheduling support for all users and ranges in the geographic area westerly from 100 degrees West to 90 degrees East longitude. WSMC/ROR will also participate with the 4950th Test Wing and the Eastern Space and Missile Center (ESMC) Scheduling Office in forecast mission planning and the daily scheduling of ARIA resources.

Chapter 3

CURRENT SCHEDULE AND CONTROL

3-1. Responsibilities. WSMC/RORB will:

a. Provide realtime scheduling in response to requests for specific range resources to support prelaunch, launch and postlaunch activities.

b. Resolve test data production priority conflicts and investigate all test data inquiries or complaints.

c. Assist WSMC Program Managers and launch site supervisors in obtaining emergency assistance in case of accident or incident.

d. During nonduty hours, manage JPASO activities and issue required JPASO reports.

3-2. Procedures. WSMC/RORB will publish an official WTR schedule which conforms to the following rules:

a. Assign operational resources identified in the OD.

b. Insure that realtime range support is provided in accordance with mission priorities and established safety criteria, and is consistent with the optimum use of support facilities.

c. Verify that reimbursement funding is available and adequate before scheduling tests for OD support.

Chapter 4

GEODETTIC EARTH ORBITING SATELLITE (GEOS)-3 OPERATION

4-1. Responsibility. WTR has responsibility for the GEOS-3 satellite scheduling, analysis, and control functions. A consolidated GEOS-3 schedule will be transmitted to all ranges each Thursday and is valid for the following week.

4-2. Scheduling Procedures.

a. Scheduling requirement (messages) should be addressed to RUWJSLC/WSMC VANDENBERG AFB CA//ROR/FEC R0220//.

b. Support requirements must be submitted to ROR not later than Monday for the following range week. Requested format is: ZULU date, ZULU time, requesting agency, number of sites, and comments. Comments should include items such as "S-band," non-coherent oscillator ("non-COHO"), "APS," etc. COHO C-Band operations will be assumed for all GEOS-3 support unless comments indicate otherwise.

4-3. Reports. Tracking summary reports are required immediately after support, as problems occur, and each week for routine support. Reports should be addressed the same as paragraph 4-2a using the following format: First Acquisition of Signal (AOS) and final Loss of Signal (LOS) in ZULU, Pulse Recurrence Frequency (PRF), number of radars, and comments. Comments should include items such as S-band, nonCOHO, or anything unusual.

4-4. GEOS Technical Questions. Technical questions on GEOS satellite operations should be directed to the WSMC Performance and Evaluation Division (ROE).

Chapter 5

USER RESPONSIBILITIES AND PROCEDURES

5-1. Prerequisites for Scheduling. Before a user can schedule a test or series of tests on the WTR, the preliminary steps of documenting test requirements with the WSMC Program Planning Control Division (ROP) must be accomplished. In addition, the user must designate in writing to WSMC/ROR, primary and alternate persons authorized to submit scheduling requests and represent the user on matters pertaining to scheduling. These individuals will be referred to as the range users' scheduling officers.

5-2. Scheduling Actions by Range Users. Prior to submitting the first forecast of planned test activity, the range user's scheduling officer will meet with WSMC/ROR to discuss standard procedures. Eighteen month forecasts and requests for weekly schedules will be submitted as follows:

a. An updated forecast of planned test activity for the ensuing 18 months will be submitted to WSMC/ROR at least five working days prior to each JPASO conference. The forecast, submitted on WSMC Form 146, Eighteen Months Missile Launch Forecast, will include information applicable to each test such as:

- (1) Operation Number, if assigned.
- (2) Month and date of test to be conducted.
- (3) Program Job Order Number (if not classified).
- (4) Vehicle type and serial number.
- (5) OD number.
- (6) Point of aerial debarkation (PAD)
- (7) Mobile sensor requirements.
- (8) Impact area.

b. Weekly Schedule Request. This request lists the range user's firm schedule requirements for tests and launch activities for the succeeding range week period. The request will be submitted to ROR on WSMC Form 15A, Schedule Request, prior to 1200 local each Tuesday and will include the following information for each test:

- change 1*
1 JULY 82
- (1) Date and time test is desired.
 - (2) Earliest and latest time test can be scheduled.
 - (3) The Missile Operations Support Requirements (Reference ~~ISTRAD 55-1~~ *ISTRAD 30-1*), when applicable.
 - (4) OD number, and any exceptions or additions.
 - (5) Job Order Number (JON).
 - (6) Location or launch complex.
 - (7) WSMC Program Support Manager (PSM) and telephone extension.
 - (8) Identity of range user and test conductor.
 - (9) Associated launch operation number.
 - (10) For prelaunch support operations, define data items required if greater or less than specified in OD.

NOTE: ROR maintains a supply of WSMC Forms 15A and 146 which are available on request.

5-3. Other Responsibilities of Range Users. The range user will:

- a. Provide representation at the JPASO six week conference and the WSMC/ROR weekly scheduling meetings.
- b. Inform JPASO of the status of all operations on the 18 month forecast.
- c. Inform the ORCC of the current status of the weekly missile and aeronautical prelaunch tests. Changes to this schedule should be coordinated as early as possible.
- d. Upon completion of a scheduled test, advise the ORCC of the test completion time, state whether or not the test support was satisfactory, and identify any problems. This information will be entered into the final range record of the test for historical purposes.
- e. Notify the ORCC if data is required from completed or cancelled operations.
- f. At no time levy support requirements directly on the WSMC Center Technical Services Contractor (CTSC).

Chapter 6

TEST DATA PRODUCTION AND CONTROL

6-1. Responsibilities. The WSMC Operations Resource Controller(ORC) on duty in the ORCC manages WSMC Data Production and coordinates with range users, support ranges, and WTR agencies on data production planning and scheduling, data evaluation, and data delivery.

6-2. Test Data. Test Data requirements are submitted to the PSM who list them in the OD and supporting documentation. The Data Distribution List (DDL) is a computer generated list of all deliverable data items, required data delivery times, and data recipients for a particular OD. Changes to the established data requirements can be made as follows:

a. Forward changes to published test data requirements to the PSM. If the change is valid, the PSM will revise the documentation. If the PSM is not available, and the test is within 12 hours, the ORC will accept emergency technical changes for test data and will see that appropriate instructions are given to the supporting sites to meet the revised data requirement.

b. When it becomes necessary to change data requirements during the conduct of an operation, the following rules apply:

(1) If the existing documentation contains the statement "Test data technical requirements may be changed at the discretion of the designated Telemetry Monitoring Official (TMO)," the Station Controller will accept realtime changes to the test data requirements directly from the TMO. This direction is limited to run speeds, display formats, pen assignments, deletions, etc. The TMO must be designated before the operation on WSMC Form 16, Operational Support Entry Request for Controlled Areas, which is the authority for the TMO to have access to the data center during the operation.

(2) If the foregoing statement is not listed on the documentation, the Data Center Supervisor will take realtime direction only from the designated TMO on WSMC Form 53, Data Time Interval Requirements (see WSMCR 310-4). The forms are available from the Data Center Supervisor, who will assist the range user's TMO in completing them. WSMC Form 53 is then handcarried to the ORCC for approval by the ORC.

c. If the range user wishes to delete, modify, or increase data requirements after the completion of a scheduled test, the range user should call the ORC to discuss the new data requirements. The ORC will either dispatch a Data Courier to pick up the Data Request (WSMC Form 11) for the new data items, or will take the information directly from the range user, fill in WSMC Form 11, and direct the CTSC to generate the data.

6-3. Data Status. Information pertaining to specific data items (when and how shipped etc.) will be provided by the ORC on request.

6-4. Data Discrepancies. In the event the range user finds errors in the test data, they should contact the ORC as soon as the discrepancy is discovered and provide answers to the following questions:

- a. Does the range user want complete replacement data?
- b. Will the range user accept partial replacement of the errant data?
- c. May the range have the data back? If so, when?
- d. If the range user is unable to return the data, is the data available for viewing by a representative from WSMC?
- e. How soon is replacement data required?

After the ORC obtains the answers to the forgoing questions, the ORC will submit a Data Request directing the CTSC to make new replacement data in time to meet the range user's specified delivery time.

6-5. Range Data Questionnaire (RDQ). An RDQ (WSMC Form 152) and a WSMC letter on Data Quality are issued with each data package delivered to range users. Range users are strongly encouraged to comply with the letter's request for comments by filling in WSMC Form 152 whenever there is a discrepancy in the test data provided to them.

6-6. Data Requests. The Data Request (WSMC Form 11) is designed to provide a quick-response method of getting individual data items after the range user has submitted his total test data requirements.

- a. WSMC Form 11 will be used to:

- (1) Request a one-time data item from a single test.
- (2) Obtain a special data item that was not previously identified in the original list of data requirements.
- (3) Obtain follow-up data that is required because of unexpected results from previous tests.
- (4) Have data tapes picked up, degaussed, recertified, and put back in service when magnetic tapes are no longer required by range users.

(5) Identify a data requirement for a data item that is not in the Standard Operational Data Identification Manual (SODIM).

(6) Increase the number of copies of a data item that are listed in the OD.

(7) Activate delivery on data items coded "On Request" in the documentation.

b. The Data Request will not be used to circumvent the submission of data requirements in accordance with the Universal Documentation System (UDS).

c. Because all labor, equipment time, and material expended in production of test data are subject to direct cost reimbursement, a Data Request will not be accepted unless the requestor can identify a valid CTSC task, JON, OD, operations number or computer charge code to which the costs can be charged.

d. Data Requests from aerospace contractors will not be accepted without the specific approval of the military sponsor or contract monitor.

e. Data produced in response to a Data Request is produced on a "first-in, first-out" basis. Normal delivery for "routine" data requests is 48 hours and for "expedite" data requests, 24 hours. However, these times are subject to range activity and equipment management decisions. In any case, the ORC will contact the requester and confirm the data delivery time.

f. Data Requests may be submitted by mail, telecopier, or telephone. Range users are encouraged to overprint, on WSMC Form 11, the information they need in submitting successive data requests. Computer generated Data Requests are also acceptable, provided ROR has an opportunity to review the format before it is put into use.

6-7. Data Handling. The WTR operates a Data Courier Service for the pickup and distribution of test data. All test data deliveries on Vandenberg AFB will be made via a Data Courier (see WSMCR 310-9, Data Courier Service). Test data is shipped out via United Parcel Service (UPS) or Fourth Class Parcel Post, unless it is classified data, in which case it goes out as First Class Registered mail. The Data Handling Center attempts to send most unclassified data out via United Parcel Service (UPS) since it is faster and cheaper. All test data Postal and UPS shipping costs are paid by the host base and not the range user.

6-8. Data Quality Control. The CTSC performs a sample inspection of all WTR data. Reproduced data from the Base Printing Plant (4392 AEROSG/DAR) is rarely inspected. Normally, most data items which have been inspected will have an inspection stamp on the label. During the inspection process, the inspector may find some data which has minor deficiencies in the labels, minor dropouts, or a pen failure. If there are minor discrepancies which do not invalidate the data, the discrepancies will be identified with a Quality Control Synopsis. If the test data recipient does not agree with the inspector's assessment of the data, notify the ORC immediately.

6-9. Data Storage. The WTR does not have the capability to store range users' test data for long periods of time. Therefore, range users are required to accept permanent custody of their own test data upon delivery by a Data Courier. When "On Request" data has not been requested after an operation, the test data will be retained in accordance with WSMCR 12-2, Test Data Retention.

6-10. Test Data Planning. There are times when the quality of test data cannot be guaranteed due to unusual test conditions. These conditions are:

a. Engineering Test Basis (ETB) Data. Test data generated during a test to satisfy an internal WTR engineering objective, will not be released to external range users.

b. Limited Commitment Basis (LCB) Data. The WTR may commit range resources that are not fully developed or that have not met all acceptance criteria established by the appropriate range agencies in order to meet range user objectives. Any LCB system called up will be at the range user's cost and the LCB data will be on a "best available basis." Since data timeliness and data quality cannot be guaranteed, LCB data will be delivered to the range user only after the approval of the PSM.

6-11. Postlaunch User-Supplied Parameters. The range user is required to provide various launch "event times" to the WTR within two hours after launch. Postlaunch data processing can not start until WTR has the event times. These event times must be in writing and be signed by the military sponsor or contract monitor.

Chapter 7

SCHEDULES AND STATISTICAL REPORTS

7-1. Forecasts and Schedules. The items listed below are prepared and distributed by WSMC/ROR. Agencies desiring any of these items must send a written request, with justification, to WSMC/ROR. Requests from nongovernment agencies must be indorsed by the requester's military sponsor, or contracting officer prior to forwarding to WSMC/ROR.

a. Eighteen Month Forecast of Launch Operations. This schedule is published every six weeks by JPASO for the succeeding 18-month period and includes all launch operations at Vandenberg AFB as well as all major tests using WSMC resources.

b. One-week Schedule. A forecast of all range activity for a seven day period starting the following Sunday. This schedule is published each Thursday morning after the weekly scheduling meeting.

c. Daily Schedule. A daily operations schedule is distributed by operational teletype in the morning of each workday. Operations may appear on this schedule at times differing from those designated in the weekly schedule due to changes in range requirements. Therefore it is mandatory that all agencies associated with the operation check the daily schedule for final scheduled times.

7-2. History of Operations. A complete history of all operations scheduled is maintained and distributed to "need-to-know" agencies. Range users must be very precise in their completion, scrub, or cancellation statement to the ORC to insure correctness in direct cost reimbursement billing and workload summary reports.

7-3. Resource Utilization Summary. The WTR Operations and Workload Summary is published monthly and provides a quantitative measurement of the capacity of range systems to do work and the amount of work performed on the range systems. This report is generated from data that is collected, stored, and processed in the Range Utilization Measurement System (RUMS). Requests for changes in distribution requirements for the document are to be submitted in writing to WSMC/ROR.

7-4. Forecasts of Resource Utilization. From the resource utilization data collected within the RUMS system, the range has the ability to forecast future workload in terms of reimbursable dollars and system hours. Historical and projected data has been used to support MRTFB, TESRP, budget submissions and numerous special studies. Requests for utilization data should be submitted to WSMC/ROR.

Chapter 8

OPERATIONS SECURITY

8-1. Schedule Classification. Some range schedules are classified to protect the number and types of classified tests that are scheduled. For these classified tests, neither the pad nor the missile and project name may be associated with the operation number and lift off time unless by secure means. Program names, missile type and model, serial number, and impact coordinates will not be used in telephone conversations or other unclassified communications. Detailed security guidance is available in the Security Classification Guide and the security matrix in the applicable OD. Weekly and daily schedules are always unclassified.

a. Unclassified reference to classified tests is limited to the operation number, date, time, OD, and MOSR designators.

b. The fact that the operation has been completed does not mean that the operation is declassified. Therefore, to protect the security of the post operation activity associated with this test, all post operation references should have the same security protection as used prior to the actual operation unless otherwise specified by the range user.

8-2. Operations Security (OPSEC) Practices. A great deal of "operation information" is not classified, but must be treated on a need-to-know basis. Observations of general launch complex activities, certain correspondence and telephone calls during routine business, and the implementation of various plans and activities related to the conduct of operations can all be indicators for a pending operation. All personnel must be aware that unclassified information, if freely discussed, can compromise classified information by implication. Information pertaining to any aspect of test operations is not to be discussed with anyone except those whose duties incident to the operation require the information. Strangers, neighbors, friends, and relatives are not in this need-to-know category. Such terms as Launch, Firing Operation, or other terms denoting an actual operation will be avoided whenever possible. The ORC will not provide telephone information on status of a scheduled operation unless it is requested by Operation Number only.

Chapter 9

Resource Scheduling and Control Forms

9-1. Forms Identification and Availability. The following WSMC Forms are used for obtaining scheduling and data support:

- a. WSMC Form 11, Data Request, paragraph 6-6.
- b. WSMC Form 15a, Schedule Request, paragraph 5-2b.
- c. WSMC Form 146, Eighteen Month Missile Launch Forecast paragraph 5-2a.
- d. WSMC Form 16, Operational Support Entry Request for Controlled Areas, paragraph 6-2b(1).
- e. WSMC Form 53, Data Time Interval Requirements, paragraph 6-2b(2).

OFFICIAL

William J. Murphy, Colonel, USAF
Commander

BARBARA L. JONES
Chief of Administration

Summary of Revised, Deleted or Added Material.
This revision reflects current WTR operational policies and procedures, and includes more precise information on direct cost reimbursement, GEOS-3 operations, Data Production, Statistical Reports, and Systems Utilization. Lastly, organizational names and abbreviations have been updated.

DISTRIBUTION:

WSMC/CD	- 1	HQ 1STRAD/TEYOS	- 1
WSMC/RM	- 1	HQ 1STRAD/XP	- 1
WSMC/RS	- 2	4392AEROSG/DEMR	- 2
WSMC/RSC	- 5	WSMC/AC	- 3
WSMC/RSD	- 5	WSMC/PM	- 4
WSMC/RSI	- 5	WSMC/SE	- 2
WSMC/RO	- 2	WSMC/XR	- 4
WSMC/ROE	- 1	WSMC/WE	- 2
WSMC/ROO	- 2	1369AVS/DO	- 1
WSMC/ROP	- 2		
WSMC/ROR	- 50		
US ARMY FIELD OFFICE	- 1		
6595MTG/CC	- 4		
6595STESTG/CC	- 4		
6595STS/CC	- 4		
SAMTO/DO	- 2		
HQ 1STRAD/DO	- 1		

DOD AGENCIES

ESMC/ROS/ROP - (1 CY EA) PATRICK AFB, FL 32925	2
COMMANDER BALLISTIC MISSILE DEFENSE SYSTEMS COMMAND - ATTN: BMDSC-HT, ROO, RS (1 CY EA) P.O. BOX 1500 HUNTSVILLE, ALA 35807	2
DIRECTOR, STRATEGIC SYSTEM PROJECTS - DEPARTMENT OF NAVY ATTN: SP 2510/LT SANDERSON WASHINGTON, D.C. 20375	1
4950 TW/DOMP - WRIGHT PATTERSON AFB, OHIO 45433	2
HQ SAC/DOMV - OFFUTT AFB, NB 68113	2
SD/DOC - P.O. BOX 92960 WORLDWAY POSTAL CENTER LOS ANGELES, CA 90009	2
COMMANDER, PACIFIC MISSILE TEST CENTER - CODE 3211 POINT MUGU, CA 93042	2
COMMANDER, PACIFIC MISSILE TEST CENTER - CODE 3020 POINT MUGU , CA 93042	1
COMMANDER, PACIFIC MISSILE TEST CENTER- CODE 3200-3 POINT MUGU, CA 93042	1
6510 TEST WING/TEVK- EDWARDS AFB CA 93523	2
COMMANDER (CODE 382)- NAVAL WEAPONS CENTER ATTN: JOHN PEOPLES CHINA LAKE, CA 93555	2
WESTERN AREA FREQUENCY COORDINATOR - POINT MUGU, CA 93042	1
AFSCF/ROSD - SUNNYVALE AFS, CA 94086	2
COMMANDING OFFICER PACIFIC MISSILE RANGE FACILITY - HAWAIIAN AREA, BARKING SANDS ATTN: RANGE PROGRAMS OFFICE	1

KEKAHA, HAWAII 96752

PRIVATE CONTRACTORS

AEROSPACE CORPORATION - ATTN: MR. J. R. WOOD P.O. BOX 1821 Bldg 7000 Room 322 VANDENBERG AFB, CA 93437	1
LOCKHEED MISSILES & SPACE COMPANY - SPACE SYSTEMS DIVISION ATTN: R. G. GAVLAK BLDG 8310 ROOM 105 VANDENBERG AFB CA 93437	1
AVCO CORPORATION - ATTN: G. M. EATON BLDG 1555 VANDENBERG AFB CA 93437	1
GENERAL DYNAMICS - CONVAIR AEROSAPCE DIVISION WESTERN TEST RANGE OPS BLDG 7525 VANDENBERG AFB CA 93437	1
TRW DEFENSE & SPACE SYSTEMS GROUP - ATTN: ED KRANZ P.O. BOX 1627 BLDG 6525 VANDENBERG AFB CA 93437	1
QUINTRON SYSTEMS - BLDG 8401 VANDENBERG AFB CA 93437	1
GENERAL ELECTRIC COMPANY/MESO - ATTN: D. M. GARWOOD P.O. BOX 1537, BLDG 488 VANDENBERG AFB CA 93437	1
AVCO/EVERETT - P.O. BOX 261 OMACPIO HIGHWAY & HANSON ROAD MAUI, HAWAII 96784	1